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10/825,326	04/16/2004	Shyng Duan Chen	33851/41979	7883

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Barnes & Thornburg
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Washington, DC 20006

EXAMINER

LE, DINH THANH

ART UNIT	PAPER NUMBER
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2816

DATE MAILED: 06/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/825,326

Applicant(s)

SHYING DUAN CHEN

Examiner

DINH T. LE

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

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DETAILED ACTION

Specification

The specification has been checked to the extent necessary to determine the presence of all possible minor errors. However, the applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections

Claim Rejections - 35 USC § 112

Claims 1-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Correction or clarification is required.

In claim 1, the recitation "the phase difference" on line 5 and "the rate" on line 9 lacks clear antecedent basis. The description of the present invention is incomplete because the claimed "rate selector" is not connected to anything. Thus, the claimed rate selector may not perform the recited function. Also, it is unclear what the "rate of the signal" on line 9 is, how the signal can have a rate, how the rate can be controlled, where the "charge" and "error correction signals" come from and how the selector can monitor the charge and control the error correction signals since it is not connected to anything. The same is true for claims 16-21.

In claim 2, the recitation "once per comparison cycle" on line 4 is confusing because it is unclear if this is additional "cycle" or further recitation of the previously claimed "cycle" on line 2.

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In claim 3, the recitation “the variable rate” on line 2 lacks clear antecedent basis and the recitation “charge” on line 2 and “rates” on line 3 is confusing because it is unclear if this is additional “charge” and “rates” or further recitation of the previously claimed “charge” and “rate” on line 9 of claim 1. The same is true for reciting “rates” on line 2 of claims 5 and 8.

In claim 4, the recitation “the comparison cycles” on line 2 and “the variable rate” on line 3 lacks antecedent basis. Also, it is unclear where the comparison cycles come from. The same is true for claim 7.

In claim 5, it is unclear how the selector can set the rates since it is not connected to anything.

In claim 6, it is unclear how the selector can hold the minimum rate, what the minimum rate is and how it can be “reached”. The same is true for claim 9.

In claim 10, the recitation “the minimum rate” and “the voltage” lacks clear antecedent basis.

In claim 17, the description of the present invention is incomplete because the claimed main power supply is not connected to anything. Thus, the claimed supply may not perform the recited function.

The remaining claims are dependent from the above claims and therefore also considered indefinite.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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Claims 1-3, 5-6 and 15 are rejected under 35 USC 102 (b) as being anticipated by Masuda (US 5,475,326).

As the best construed, Masuda disclose in Figures 6-7 a PLL circuit comprising:

- an oscillator (14) ;
- a phase frequency detector (1) for receiving the oscillator signal and a reference signal (V);
- a filter (11) coupled to the phase detector (1) and the oscillator (14); and
- a rate selector (15) monitoring a charge on the capacitor (13) and controlling the rate of error correction signals as a function of the charge on the capacitor (13).

With regard to claim 2, the selector (15) sets the rate of error signal tyo once per comparision cycle of the phase detector (1) until the charge reaches a first threshold value (V1) and decrease the rate to less than once per comparision cycles after the charge reaches the threshold value (V1, V2).

With regard to claim 3, the recitation “plurality of threshold values is read on the values (V1, V2) in Figure 7.

With regard to claim 15, the recitation “logic circuit” is read on the elements (30, 31, 33, 36).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 16-17 are rejected under 35 USC 103 (a) as being unpatentable over Dickmann (US 6,853,252) in view of Masuda (US 5,475,326).

Dickmann discloses in Figures 1-3 and 6 a circuit comprising:

- a master PWM (110A);
- a slave PWM (110B, 110C); and
- wherein the PLL circuit (300) receiving the reference signal (700) and generating the

oscillator signals (480, 482) which is the slave PWM signal.

However, Dickmann does not disclose that the PLL circuit comprising the rate selector as recited in claim 1. Masuda teaches in Figure 6 a PLL circuit comprising all of the limitations of claim 1 as stated above for the purpose of shorting a phase synchronization pull-in time without damage the jitter characteristics, see lines 39-44, page 3. It would have been obvious to a person having skill in the art at the time the invention was made to employ the PLL circuit suggested by Masuda in the circuit of Dickmann for the purpose of shorting a phase synchronization pull-in time without damage the jitter characteristics.

Allowable Subject Matter

Claims 4, 7-14 and 18-19 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

The claims are allowed because the prior art of record does not show the counter and the soft-start circuit as combined in the claims.


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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DINH T. LE whose telephone number is (571) 272-1745. The examiner can normally be reached on Monday-Friday (8AM-7PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, TIMOTHY CALLAHAN can be reached at (571) 272-1740.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


DINH LE
Primary Examiner